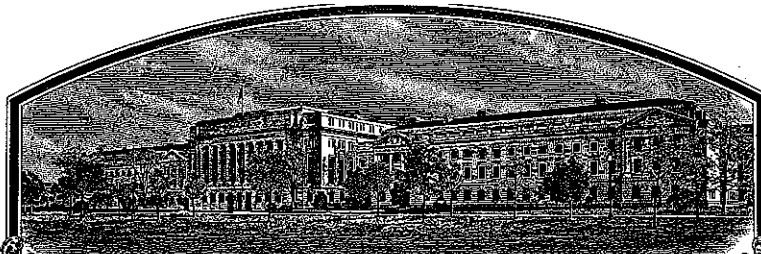


No.

200700414



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

*Syngenta Seeds, Inc.*

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE FOREGOING PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

BEAN, GARDEN

'Nash'

*In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this fifth day of February, in the year two thousand and eight.*

Attest:

Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE  
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

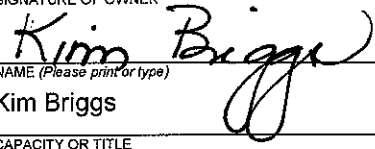
Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER <b>Syngenta Seeds, Inc.</b>		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME		3. VARIETY NAME <b>Nash</b>	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) <b>600 North Armstrong Place Boise, ID 83704 USA</b>		5. TELEPHONE (include area code) <b>208-465-8522</b>		<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center; margin: 0;">FOR OFFICIAL USE ONLY</p> <p>PVPO NUMBER <b>#200700414</b></p> <p>FILING DATE <b>AUGUST 17, 2007</b></p> </div>	
		6. FAX (include area code) <b>208-467-4559</b>			
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) <b>Corporation</b>		8. IF INCORPORATED, GIVE STATE OF INCORPORATION <b>Delaware</b>		9. DATE OF INCORPORATION <b>02/25/1975</b>	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) <b>Kim Briggs c/o Syngenta Seeds, Inc. 6338 Highway 20-26 Nampa, ID 83687</b>				<div style="border: 1px solid black; padding: 5px;"> <p>FILING AND EXAMINATION FEES: \$ <b>4,382.00</b></p> <p>DATE <b>8/17/07</b></p> <p>CERTIFICATION FEE: \$ <b>768.00</b></p> <p>DATE <b>12/12/07</b></p> </div>	
11. TELEPHONE (Include area code) <b>208-465-8522</b>		12. FAX (Include area code) <b>208-467-4559</b>		13. E-MAIL <b>kim.briggs@syngenta.com</b>	
14. CROP KIND (Common Name) <b>Garden Bean</b>		16. FAMILY NAME (Botanical) <b>Fabaceae</b>		18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (OPTIONAL) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERCIALIZATION.	
15. GENUS AND SPECIES NAME OF CROP <b>Phaseolus vulgaris L.</b>		17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)				20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act) <input type="checkbox"/> YES (If "yes", answer items 21 and 22 below) <input checked="" type="checkbox"/> NO (If "no", go to item 23)	
a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Exhibit F. Declaration Regarding Deposit g. <input checked="" type="checkbox"/> Voucher Sample (3,000 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) h. <input checked="" type="checkbox"/> Filing and Examination Fee (\$4,382), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)				21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED	
				22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS. <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED (If additional explanation is necessary, please use the space indicated on the reverse.)	
23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)				24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)	

25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER 		SIGNATURE OF OWNER	
NAME (Please print or type) <b>Kim Briggs</b>		NAME (Please print or type)	
CAPACITY OR TITLE <b>PVP Specialist</b>	DATE <b>08/14/2007</b>	CAPACITY OR TITLE	DATE

(See reverse for instructions and information collection burden statement)

**GENERAL INSTRUCTIONS:** To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be **received** in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E, F; (3) for a tuber reproduced variety, verification that a viable (*in the sense that it will reproduce an entire plant*) tissue culture will be deposited and maintained in an approved public repository; and (4) payment by credit card or check drawn on a U.S. bank for \$4,382 (\$518 filing fee and \$3,864 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice). **NEW:** With the application for a seed reproduced variety or by direct deposit soon after filing, the applicant must provide at least 3,000 viable untreated seeds of the variety *per se*, and for a hybrid variety at least 3,000 untreated seeds of each line necessary to reproduce the variety. Partial applications will be held in the PVPO for not more than 90 days; then returned to the applicant as un-filed. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a payment by credit card or check payable to "Treasurer of the United States" in the amount of \$768 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

**NOTES:** It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

**Plant Variety Protection Office**  
**Telephone:** (301) 504-5518 **FAX:** (301) 504-5291  
**General E-mail:** PVPOMail@usda.gov  
**Homepage:** <http://www.ams.usda.gov/science/pvpo/PVPIndex.htm>

#200700414

**SPECIFIC INSTRUCTIONS:**

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and **provide evidence** that the permanent name of the application variety (even if it is a parental, inbred line) has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: U.S. Department of Agriculture, Agricultural Marketing Service, Livestock and Seed Programs, **Seed Regulatory and Testing Branch**, 801 Summit Crossing Place, Suite C, Gastonia, North Carolina 28054-2193 Telephone: (704) 810-8870. <http://www.ams.usda.gov/lsg/seed.htm>.

**ITEM**

- 19a. Give:
- (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
  - (2) the details of subsequent stages of selection and multiplication;
  - (3) evidence of uniformity and stability; and
  - (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
- (1) identify these varieties and state all differences objectively;
  - (2) attach replicated statistical data for characters expressed numerically and demonstrate that these are clear differences; and
  - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
20. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
23. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
24. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

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**22. CONTINUED FROM FRONT** (Please provide a statement as to the limitation and sequence of generations that may be certified.)

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**23. CONTINUED FROM FRONT** (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

Sold domestically on October 19, 2006 to Seedway.

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**24. CONTINUED FROM FRONT** (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

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According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

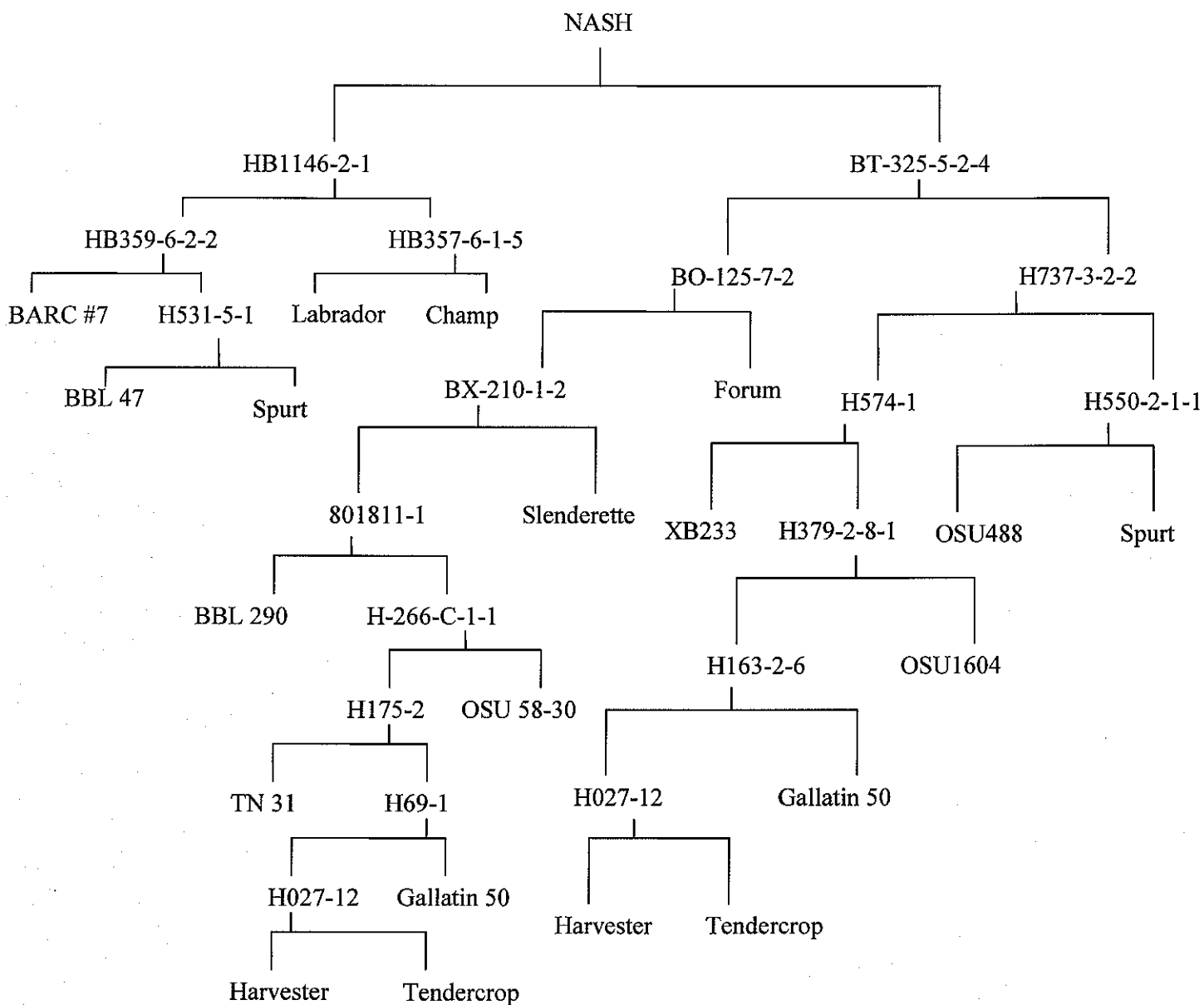
The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

**Exhibit A**  
**Origin and Breeding History**  
**'Nash'**

Garden bean cultivar Nash originated from a hand-pollinated cross between Syngenta Seeds, Inc. breeding lines HB1146-2-1 and BT-325-5-2-4. HB359-6-2-2, HB357-6-1-5, Champ, BO-125-7-2, H737-3-2-2, H531-5-1, BX-210-1-2, Forum, H574-1, H550-2-1-1, 801811-1, H379-2-8-1, BBL 290, H-266-C-1-1, H 163-2-6, H175-2, TN 31, H69-1, H027-12, and Gallatin 50 are Syngenta Seeds, Inc. breeding and commercial lines. OSU488, OSU1604, OSU58-30 are breeding lines developed by Oregon State University. BBL 47, Labrador, Spurt, and Harvester are commercial varieties and XB233 is an experimental variety developed by Seminis Inc. Slenderette is a variety developed by Charter Seed Company. Tendercrop and BARC #7 are a varieties developed by USDA.

Mass selection method of breeding was followed during F2 and F3 to accumulate the traits of upright bush habit, medium-dark straight pods (suitable for fresh and processing), and yield. The pedigree method of selection was applied in F4 and F5 for the traits of maturity and four sieve diameter pods. The F6 generation was bulk harvested to supply a seed source for further increases. Nash has been uniform and genetically stable for five generations of increases from the original F7, being free of off-types and variants



**Exhibit B**  
**Statement of Distinctness**  
**'Nash'**

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Garden bean cultivar Nash is a bush snap bean suitable for fresh and processing markets and can be compared to the variety Dusky. Garden bean cultivar Nash and Dusky are significantly different in four-sieve pod width and depth when grown in Idaho and Minnesota in year 2005. Dusky has a larger four-sieve pod width and depth measurement on average than Nash. Four-sieve pod width for Dusky was 8.72 mm and NASH was 8.30 mm in Minnesota. In Idaho Dusky (9.48 mm) was an average of 0.6 mm greater in four-sieve pod width than Nash (8.84 mm). Dusky four-sieve pod depth was 9.13 in Minnesota and 9.6 in Idaho whereas Nash was 8.24 and 7.96, respectively.

The values for four sieve pod width (mm), and four sieve pod depth (mm), are based on average measurements made in Minnesota and Idaho in 2005. Twenty plants of each cultivar were measured for plant height and spread. Data was collected on pods harvested from 100 plant plots of each cultivar. Twenty random samples from the four-sieve pod sub-sample were measured for pod width and depth.

Explanation of statistical analysis variables used in the following attachments.

S4PWNMN = Four-Sieve Pod Width (mm), NASH, Minnesota  
S4PWDMN = Four-Sieve Pod Width (mm), Dusky, Minnesota  
S4PDNMN = Four-Sieve Pod Depth (mm), NASH, Minnesota  
S4PDDMN = Four-Sieve Pod Depth (mm), Dusky, Minnesota  
  
S4PWNID = Four-Sieve Pod Width (mm), NASH, Idaho  
S4PWDID = Four-Sieve Pod Width (mm), Dusky, Idaho  
S4PDNID = Four-Sieve Pod Depth (mm), NASH, Idaho  
S4PDDID = Four-Sieve Pod Depth (mm), Dusky, Idaho

Descriptive Statistics using Statistix 8.0

Variable	N	Mean	SD	Minimum	Maximum
S4PWNMN	20	8.30	0.44	7.29	9.25
S4PWDMN	20	8.72	0.39	8.03	9.54
S4PDNMN	20	8.24	0.46	7.43	9.31
S4PDDMN	20	9.13	0.41	8.52	9.90
S4PWNID	20	8.84	0.57	7.90	10.49
S4PWDID	20	9.48	0.47	8.31	10.34
S4PDNID	20	7.96	0.64	6.85	8.91
S4PDDID	20	9.61	0.46	8.50	10.28

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One-way AOV and LSD Test for: S4PWNMN S4PWDMN using Statistix 8.0

Source	DF	SS	MS	F	P
Between	1	1.82756	1.82756	10.4	0.0026
Within	38	6.66704	0.17545		
Total	39	8.49460			

Grand Mean 8.5147 CV 4.92

	Chi-Sq	DF	P
Bartlett's Test of Equal Variances	0.26	1	0.6076
Cochran's Q	0.5595		
Largest Var / Smallest Var	1.2700		

Component of variance for between groups 0.08261  
Effective cell size 20.0

**Variable Mean**  
S4PWNMN 8.3010  
S4PWDMN 8.7285  
Observations per Mean 20  
Standard Error of a Mean 0.0937  
Std Error (Diff of 2 Means) 0.1325

**LSD All-Pairwise Comparisons Test**

**Variable Mean Homogeneous Groups**  
S4PWDMN 8.7285 A  
S4PWNMN 8.3010 B

Alpha 0.05 Standard Error for Comparison 0.1325  
Critical T Value 2.024 Critical Value for Comparison 0.2681  
All 2 means are significantly different from one another.

One-Way AOV and LSD Test for: S3PDNMN S4PDDMN using Statistix 8.0

Source	DF	SS	MS	F	P
Between	1	8.0013	8.00130	40.7	0.0000
Within	38	7.4630	0.19639		
Total	39	15.4643			

Grand Mean 8.6898 CV 5.10

	Chi-Sq	DF	P
Bartlett's Test of Equal Variances	0.23	1	0.6290
Cochran's Q	0.5560		
Largest Var / Smallest Var	1.2521		

Component of variance for between groups 0.39025  
Effective cell size 20.0

Nash Exhibit B 6

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**Variable Mean**  
 S4PDNMN 8.2425  
 S4PDDMN 9.1370  
 Observations per Mean 20  
 Standard Error of a Mean 0.0991  
 Std Error (Diff of 2 Means) 0.1401

**LSD All-Pairwise Comparisons Test**

**Variable Mean Homogeneous Groups**  
 S4PDDMN 9.1370 A  
 S4PDNMN 8.2425 B

Alpha 0.05 Standard Error for Comparison 0.1401  
 Critical T Value 2.024 Critical Value for Comparison 0.2837  
 All 2 means are significantly different from one another.

One-Way AOV and LSD Test for: S4PWNID S4PWDID using Statistix 8.0

**One-Way AOV for: S4PWNID S4PWDID**

Source	DF	SS	MS	F	P
Between	1	4.0768	4.07682	14.6	0.0005
Within	38	10.5755	0.27830		
Total	39	14.6523			

Grand Mean 9.1622 CV 5.76

	Chi-Sq	DF	P
Bartlett's Test of Equal Variances	0.65	1	0.4199
Cochran's Q	0.5929		
Largest Var / Smallest Var	1.4565		

Component of variance for between groups 0.18993  
 Effective cell size 20.0

**Variable Mean**  
 S4PWNID 8.8430  
 S4PWDID 9.4815  
 Observations per Mean 20  
 Standard Error of a Mean 0.1180  
 Std Error (Diff of 2 Means) 0.1668

Nash Exhibit B 7



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**LSD All-Pairwise Comparisons Test****Variable Mean Homogeneous Groups**

S4PWDID 9.4815 A

S4PWNID 8.8430 B

Alpha 0.05 Standard Error for Comparison 0.1668

Critical T Value 2.024 Critical Value for Comparison 0.3377

All 2 means are significantly different from one another.

One-Way AOV and LSD Test for: S4PDNID S4PDDID using Statistix 8.0

Source	DF	SS	MS	F	P
Between	1	27.1920	27.1920	86.4	0.0000
Within	38	11.9596	0.3147		
Total	39	39.1516			

Grand Mean 8.7905 CV 6.38

	Chi-Sq	DF	P
Bartlett's Test of Equal Variances	2.05	1	0.1526
Cochran's Q	0.6617		
Largest Var / Smallest Var	1.9561		

Component of variance for between groups 1.34386

Effective cell size 20.0

**Variable Mean**

S4PDNID 7.9660

S4PDDID 9.6150

Observations per Mean 20

Standard Error of a Mean 0.1254

Std Error (Diff of 2 Means) 0.1774

**LSD All-Pairwise Comparisons Test****Variable Mean Homogeneous Groups**

S4PDDID 9.6150 A

S4PDNID 7.9660 B

Alpha 0.05 Standard Error for Comparison 0.1774

Critical T Value 2.024 Critical Value for Comparison 0.3591

All 2 means are significantly different from one another.

Nash Exhibit B 8

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The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

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U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY  
PLANT VARIETY PROTECTION OFFICE  
BELTSVILLE, MD 20705

Exhibit C

OBJECTIVE DESCRIPTION OF VARIETY  
Garden Bean (*Phaseolus vulgaris* L.)

NAME OF APPLICANT (S) <i>Syngenta Seeds, Inc.</i>	TEMPORARY OR EXPERIMENTAL DESIGNATION	VARIETY NAME <i>Nash</i>
ADDRESS (Street and No., or RD No., City, State, Zip Code, and Country) <i>600 North Armstrong Pl. Boise, ID 83704 USA</i>		FOR OFFICIAL USE ONLY PVPO NUMBER <i>#200700414</i>

## PLEASE READ ALL INSTRUCTIONS CAREFULLY:

Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g.,    or   ) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties centered in the same trial. Measured data should be for SPACED PLANTS. Ranges should also be given. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: \_\_\_\_\_

Please answer all questions for your variety; lack of response may delay progress of your application.

## 1. TYPE:

1 = Garden      2 = Flageolet      3 = Romano

## 2. MARKET MATURITY:

Days to Edible Pods

Heat Units to Edible Pods

Number of Days Earlier Than

Same As

Number of Days Later Than

Comparison Variety

## Comparison Varieties

1 = Tender crop  
3 = Gold rush  
5 = Gitana  
7 = Bush Blue Lake 290

2 = Kentucky Wonder  
4 = Slenderette  
6 = Provider

8 = Other (Specify Below)

*Bronco*

## 3. PLANT:

cm Spacing Between Plants in a Row

Habit

1 = Determinate  
2 = Indeterminate, Erect Stem and Branches  
3 = Indeterminate with Weak and Prostrate Stem and Branches  
4 = Indeterminate Climbing Habit with Weak, Long, and Twisted Stem and Branches

cm Height

cm Shorter Than

Same Height As

cm Taller Than

*Not the same as any of the comparison varieties (1-8) in sec. 2. Use Comparison Varieties from Section 2*

*Not taller than any of the comparison varieties (1-8) in section 2.*

## 3. PLANT: (continued)

☒ 21 cm Spread☒ 05 cm Narrower Than☒ 4

Same Width As

☒ 7

Comparison Variety

☐ ☐

cm Wider Than

☐

→ Not wider than any.

Use Comparison Varieties from Section 2☒ 3 Pod Position: 1 = Low 2 = High 3 = Scattered☒ 2 Bush Form (Illustrated Below)

1 = Spherical Bush Form



2 = Stem Bush Form



3 = Wide Bush Form



4 = High Bush Form

5 = Other (Specify) \_\_\_\_\_

## 4. LEAVES:

☒ 1 Surface: 1 = Dull 2 = Glossy 3 = Indeterminate☒ 2 Size: 1 = Small (Gitana) 2 = Medium 3 = Large (Tender Crop)☒ 2 Color: 1 = Light Green (as Light or Lighter than Gold Rush)  
2 = Medium Green  
3 = Dark Green (as Dark or Darker than Bush Blue Lake 290)

## 5. ANTHOCYANIN PIGMENT:

(1 = Absent

2 = Present)

☒ 1 Flowers☒ 1 Stems☒ 1 Pods☒ 1 Seeds☒ 1 Leaves☒ 1 Petioles☒ 1 Peduncles☒ 1 Nodes

## 6. FLOWER COLOR AND DAYS TO BLOOM:

☒ 1 Color of Standard☒ 1 Color of Wings☒ 1 Color of Keel☒ 35 Days to 50% BloomFlower Color Choices

1 = White 2 = Cream

3 = Pink 4 = Lilac

5 = Purple 6 = Blue

7 = Other (Specify) \_\_\_\_\_

## 7. PODS (Edible Maturity):

☒ 2 Exterior Color: (Fresh)  
1 = Light Green (as Light or Lighter than Provider)  
2 = Medium Green  
3 = Dark Green (as Dark or Darker than Bush Blue Lake 290)  
4 = Yellow (Gold Rush)  
5 = Green-red Variegated (Horticultural)  
6 = Other (Specify) \_\_\_\_\_☒ 2 Processed Pods (Exterior Color): 1 = Light (Tender Crop) 2 = Dark (Bush Blue Lake 290)☒ 1 Dry Pod Color: 1 = Buckskin (Sprite) 2 = Green, Persistent Chlorophyll (Hystyle)

## 7. PODS (continued):

**3** Cross Section Pod Shape: 1 = Flat 2 = Heart (Pear) 3 = Round 4 = Figure Eight  
(Middle of the Pod)



**2** Crease Back: 1 = Present 2 = Absent

**2** Pubescence: 1 = None (Slenderette) 2 = Sparse 3 = Considerable (Provider or Sprite)

**1** Constriction (Interlocular Cavitation): 1 = None 2 = Slight 3 = Deep

**1/1** mm Spur Length

**2** Fiber: 1 = None (Bush Blue Lake 290) 2 = Sparse 3 = Considerable (Sprite)

**6** Number of Seeds per Pod

**2** Suture String: 1 = Present 2 = Absent

**2** Seed Development: 1 = Slow (Bush Blue Lake 290) 2 = Medium 3 = Fast (Provider)

**1** Machine Harvest: 1 = Adapted 2 = Not Adapted

Percent sieve size distribution at optimum maturity for not-flat pods

4.76 to 5.76mm	5.76 to 7.34mm	7.34 to 8.34mm	8.34 to 9.53mm	9.53 to 10.72 mm	>10.72mm
9 %	28 %	26 %	36 %	1 %	0 %

3 Sieve	<b>1/3</b>	cm Length	<b>07</b>	mm width	<b>07</b>	Total mm Thickness
4 Sieve	<b>1/4</b>	cm Length	<b>08</b>	mm width	<b>08</b>	Total mm Thickness
5 Sieve	<b>1/6</b>	cm Length	<b>08</b>	mm width	<b>08</b>	Total mm Thickness
6 Sieve		cm Length		mm width		Total mm Thickness

## 8. SEED COLOR:

**4** Seed Coat Luster: 1 = Shiny 2 = Dull 3 = Semi-Shiny 4 = Variable

**1** Seed Coat: 1 = Monochrome 2 = Polychrome

**0/1** Primary Color: 1 = White 2 = Yellow 3 = Buff 4 = Tan 5 = Brown 6 = Pink 7 = Red 8 = Purple  
9 = Blue 10 = Black 11 = Other

**0/0** Secondary Color: 1 = White 2 = Yellow 3 = Buff 4 = Tan 5 = Brown 6 = Pink 7 = Red 8 = Purple  
9 = Blue 10 = Black 11 = Other

**1** Seed Coat Pattern: 1 = Solid 2 = Splashed 3 = Mottled 4 = Striped 5 = Flecked 6 = Dotted

**2** Hilum Ring: 1 = Absent 2 = Present

**02** Hilum Ring Color: 1 = White 2 = Yellow 3 = Buff 4 = Tan 5 = Brown 6 = Pink 7 = Red 8 = Purple  
9 = Blue 10 = Black 11 = Other

## 9. SEED SHAPE AND SIZE:

**1** Hilum View:



1 = Elliptical



2 = Oval



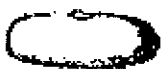
3 = Round

**2** Cross Section: 1 = Elliptical 2 = Oval 3 = Cordate 4 = Round

## 9. SEED SHAPE AND SIZE: (continued)

1

Side View:



1 = Oval to Oblong

2 = Round

3 = Reniform

30

gm/100 Seeds

06

gm/100 Seeds Lighter Than

gm/100 Seeds Same As

08

gm/100 Seeds Heavier Than

1

5

Not the same as any.  
Comparison Variety

## 10. DISEASE RESISTANCE: 0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant

0

Anthracnose (*Colletotrichum lindemuthianum*)☐

Race Alpha

☐

Race Beta

☐

Race Gamma

☐

Race Delta

☐

Race Epsilon

☐

Race Lambda

☐

Race Kappa

☐

Specify Race \_\_\_\_\_

0

Bean Rust (*Uromyces appendiculatus*)☐

Race 38

☐

Race 39

☐

Race 40

☐

Race 44

☐

Race 45

☐

Race 46

☐

Race 49

☐

Race 50

☐

Race 51

☐

Race 52

☐

Race 54

☐

Race 56

☐

Race 59

☐

Specify Race \_\_\_\_\_

0

Powdery Mildew (*Erysiphe polygoni*)

0

Fusarium Root Rot (*Fusarium solani* f. sp. *phaseoli*)

0

Pythium Root Rot (*Pythium* spp.)

0

Aphanomyces Root Rot (*Aphanomyces euteiches*)

0

Rhizoctonia Root Rot (*Rhizoctonia solani*)

0

Pythium Blight or Aereal Pythium (*Pythium ultimum*)

0

Angular Leaf Spot (*Isariopsis griseola*)

0

Bacterial Wilt (*Corynebacterium flaccumfaciens* subsp. *flaccumfaciens*)

1

Bacterial Brown Spot (*Pseudomonas syringae* pv. *syringae*)

0

Common Bacterial Blight (*Xanthomonas campestris* pv. *phaseoli*)

1

Halo Blight (*Pseudomonas syringae* pv. *phaseolicola*)☐

Race 1

☐

Race 2

0

Clover Yellow Vein Virus (CYVV)

☐

Bean Common Mosaic Virus (BCMV)

2

BV1

2

NY15

0

NL2

0

NL3

0

NL4

0

NL8

0

Florida

0

Idaho

0

Mexican

0

Western

0

Type

☒

Other (Specify)

Dominant 1 Gene Resistance Seed Transmission

0

Yellow Bean Mosaic Virus (BYMV)

4

Curly Top Virus (CTV)

☐

Other (Specify Disease and Race or Strain \_\_\_\_\_)

11. INSECT RESISTANCE: 0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant

<input type="checkbox"/> 0	Aphid	<input type="checkbox"/> 0	Root Knot Nematode
<input type="checkbox"/> 0	Leafhopper	<input type="checkbox"/> 0	Seed Corn Maggot
<input type="checkbox"/> 0	Lygus	<input type="checkbox"/> 0	Thrips
<input type="checkbox"/> 0	Pod Borer	<input type="checkbox"/> 0	Weevils
<input type="checkbox"/>	Other (Specify) _____		

12. PHYSIOLOGICAL RESISTANCE: 0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant

<input type="checkbox"/> 0	Heat	<input type="checkbox"/> 0	Cold	<input type="checkbox"/> 0	Drought
<input type="checkbox"/> 0	Air Pollution	<input type="checkbox"/> 0	Ozone		
<input type="checkbox"/>	Other (Specify) _____				

13. COMMENTS:

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

**EXHIBIT E**  
**STATEMENT OF THE BASIS OF OWNERSHIP**

1. NAME OF APPLICANT(S)  Syngenta Seeds, Inc.	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME  Nash
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country)  600 North Armstrong Place Boise, ID 83704	5. TELEPHONE (Include area code)  208-465-8522	6. FAX (Include area code)  208-467-4559
7. PVPO NUMBER  <b>#200700414</b>		

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain. ☒ YES ☐ NO

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country. ☒ YES ☐ NO

10. Is the applicant the original owner? ☒ YES ☐ NO If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐ YES ☐ NO If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES ☐ NO If no, give name of country

11. Additional explanation on ownership (Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):

Nash was bred and developed by plant breeders employed by Syngenta Seeds, Inc. By agreement between the employee and Syngenta Seeds, Inc., all rights to any invention, discovery or development made by the employee while employed by Syngenta Seeds were assigned to Syngenta Seeds, Inc., with no rights retained by the employee.

**PLEASE NOTE:**

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 5 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

**U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY  
PLANT VARIETY PROTECTION OFFICE  
BELTSVILLE, MD 20705**

**EXHIBIT F  
DECLARATION REGARDING DEPOSIT**

<b>NAME OF OWNER (S)</b> Syngenta Seeds, Inc.	<b>ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country)</b> 600 North Armstrong Place Boise, ID 83704	<b>TEMPORARY OR EXPERIMENTAL DESIGNATION</b>  <b>VARIETY NAME</b> Nash
<b>NAME OF OWNER REPRESENTATIVE (S)</b> Kim Briggs	<b>ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country)</b> 6338 Highway 20-26 Nampa, ID 83687 USA	<b>FOR OFFICIAL USE ONLY</b>  <b>PVPO NUMBER</b> #200700414

I do hereby declare that during the life of the certificate a viable sample of propagating material of the subject variety will be deposited, and replenished as needed periodically, in a public repository in the United States in accordance with the regulations established by the Plant Variety Protection Office.

Kim Briggs  
Signature

8-15-07  
Date